A decade of capacity building on Ecohealth/One Health in Southeast Asia: Challenges and perspectives

Fred Unger & Hung Nguyen-Viet
International Livestock Research Institute, Vietnam

CGIAR Vietnam Brown Bag Lunch Seminar No. 8
ILRI Hanoi, Vietnam, 22 April 2015

RESEARCH PROGRAM ON Agriculture for Nutrition and Health
CGIAR
Led by IFPRI

ILRI
INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

Presentations overview

1. EH – pillars and principles
2. EcoZD
3. Case studies

Introduction: Ecohealth Theory

- IDRC's Ecohealth Program Initiative is based on three methodological pillars (Lebel, 1994):
  - transdisciplinarity, participation, and equity.

- More recently, Charron (2012) expanded on the three pillars of Lebel, introducing six Key Principles of EcoHealth. Three of Charron's principles are substantially similar to one of the pillars introduced by Lebel:
  - Systems thinking, Knowledge to action, Transdiciplinary, Participation, Equity, Sustainability

System Thinking

System thinking suggests that the way to understand a system is to **examining the linkages and interactions between the elements that make up the system**

- In contrast to reductism which looks more in details of each part
- Helps to apply some order to the complex reality of health related to the social-ecological system

System perspective: **scale** is important

e.g. time scale: daily routines, seasons, climate change

Challenges:

- Define **boundaries** of the system
- Choices between inclusiveness and feasibility based on time skills and capacity
- ILRI EcoZD/ComAcross: review objectives and activities

Modified after Charon 2012

Knowledge to action

Knowledge to action refers to the idea that **knowledge generated by research is** then **used to improve health** and well-being through an improved environment

- Fundamental for an Ecosystem approach
- What different groups are interested to change
- Approaches are different, community versus policy makers
- Ideally research becomes an ongoing intervention process
- **Knowledge moves both ways**
  - Researchers pushing new knowledge into policies
  - Policy is requesting new knowledge from researchers
  - Collaborative exchange and knowledge platforms
- Generation of unintended (positive and negative effects)
  - Examples from EcoZD

Modified after Charon 2012

Participation

- **Aims to achieve consensus and cooperation** within community and scientific and decision-making groups
  - Define on who should participate and what will be there role
  - Mapping of potential actors, stakeholders or groups
  - Helps to identify existing barriers to change
  - Can provide option for negotiating concrete steps to move forward

Reality: Farmers are often the most disadvantaged group when facing rigid control measures

  - Large scale versus backyard
  - E.g. Vietnam
    - Policy against small scale slaughter slots or small scale farms in communities
    - Community have positive perception on local slaughterhouses

Modified after Charon 2012

Transdisciplinary research

- **Inclusive vision of health** problems **by scientists from multiple disciplines, community and policy actors**
  - Evolves **the integration** of research methodologies and tools across disciplines **including none academics perspectives and (local) knowledge**
  - From the first idea until dissemination/publication
  - Wide **range of skills sets** are needed which are usually not part of academic training
    - Consensus building
    - Facilitation …
    - Communication …
    - Mediation skills

Modified after Charon 2012

Gender and social equity

- Involves **analyzing the respective roles** of men and women, and various social groups;
  - Gender
  - Social cultural
  - Economic class
  - Age
  - Ethnic minorities
  - Marginalised groups

Why?

- Inequity in access to health care
- Woman held major responsibility for health of their families
- Anyhow, often little power on decisions how the HH income is used
- There is a need for more gender and social analysis in EH research

Modified after Charon 2012

Sustainability

- As research for development EH research aims to make ethical positive long lasting changes
- Sustainability implies that changes are environmentally sound and socially durable

- What will remain after the lifetime of the project
- Short term needs might be not consistent with long term process for improvement of helth

Modified after Charon 2012

Ecosystem Approaches to the Better Management of Zoonotic Emerging Infectious Diseases in Southeast Asia (EcoZD)

Swiss TPH

GHGI

Veterinarians Without Borders / Vétérinaires Sans Frontières

London School of Hygiene & Tropical Medicine

RVC Royal Veterinary College University of London

eco ZD

2007 – 2013 (++)

6 countries:

- **Thailand**
- **Vietnam**
- **Cambodia**
- **Indonesia**
- **Laos**
- **China (Yunnan)**

IDRC | CRDI Canada

International Development Research Centre

Centre de recherches pour le développement international

Overview

- **General objective**:

  Increase the EcoHealth capacity in SE Asia targeting the risks and impacts of Zoonotic Emerging Infectious Diseases (ZEIDs) and how feasible options can be best implemented

- **Appraisal & Consultative Process**
  - Scoping Study
  - EcoHealth Uptake, Outcome Mapping,
    (ILRI – Teams & Teams to boundary partners)

- **Balanced set of case studies and capacity built**
- **Networking**

Summary of outputs/outcomes

Outcome	Theme	Output
Capacity building	EcoHealth research: learning by doing	Over **100 researchers in SE Asia** involved in **9 projects** in 6 countries
	Training courses	3 major EcoHealth courses
	Short courses & lectures	More than 20 lectures given
	Graduate fellows	PHD (1) and **MSc (4)**
	Training in research methodologies	Participatory learning; FGD; outcome mapping; risk analysis
Research disseminated	Peer-reviewed articles	**6 published in international journals** **5 under preparation**
	Presentations at conferences	>**60 presentations/posters at 14 conferences** (Kunming, Maastricht ect)
Sustainable EcoHealth in the region	Regional institutions	**2 EHRC and CENPHER** supported
	Training manuals	**Two EcoHealth training manuals**
Policy influenced	National	5 teams engaged national policy makers, **4 sets of policy briefs**
	Regional and international	Regional symposium for policy makers Engagement in FAO, WHO, OIE initiatives

Eco ZD - EH story

- With the focus on zoonotic diseases initial meetings were conducted with actors from MOH or MOA most of them not a focus of previous EcoHealth initiatives
- Introducing ***learning by doing*** EcoHealth approach
- It was easier to achieve early success with partners already experienced in EH e.g. Cambodia. More difficult but perhaps more significant, was this with teams with almost no previous exposure to multi-disciplinary approaches (e.g. China)
- **Extended period of consultation** with teams of what EcoHealth involves and how to approach research

Eco ZD - EH story

- **Project did not come with pre-determined research questions**, there was room for adaptation in the proposal
- Our emphasis on capacity building - an approach where **teams made key research decisions** and were supported in analysis and write-up.
- **Multi-year process of inter-personal relationship-building**
- **Mid 2010** - critically reviewed the objectives (and outcomes) **Amendments** were made based on own but also reflections of partners – 2 EHRC established

Start up challenges

- **<u>Identification of research teams</u>**
  - Initial contacts were made with MOA & MOH due to focus on zoonoses. Most of actors, partners had doubts on the added value of EH.
  - Easier for teams with previous EH experience
  - More difficult for teams from countries with rigid top-down institutional environment (e.g. China and South Vietnam)

Approach: Repeated consultations, sufficient time allocation, sometimes build up on previous linkages

Start up challenges

Identification of a common research interest

- Often a painful and time consuming process
- **Entirely left with teams**, only focus on zoonoses was crucial
- Most critical in South Vietnam and China, classical silo thinking
- Who will lead & sharing of budgets

Approach: Various consultations and mentoring, EH training, sufficient time window, ILRI facilitated the process

Indonesia: Call for proposal, submitted proposals were evaluated by an independent expert group

CRA were processed after agreement on topic was achieved

Challenges

Recognition of the added value of other *"none medical expertise"* (e.g. social science or socio economic)

- Teams were led by MD's or Vets with mainly biometric background
- To work with social scientist was new for most of them

Easier: Indonesia and Thailand, as interdisciplinary collaboration existed already

e.g. CMU Vet Fac (Thailand); or UGM-KKN, CIVAS

More challenging : China and Laos

Approach: Specific and continued mentoring by EH champions,
Training (EH, research methods, participatory tools, outcome mapping)

Continued challenges

EH incorporation in the case studies – reality check

- All teams conducted research **with some elements of EcoHealth** though for some it was more a bio-medical One-Health approach
- Others branded their research as EcoHealth but without major differences from conventional veterinary public health projects

Contributing factors to challenges:

- **Lack of standard definitions** of EcoHealth and One-Health led to unnecessary confusion.
- **Concerns on translation** of terms e.g. ‘transdisciplinary’ or “equity” – retaining of original meaning after translation to local languages
- **Gender aspects** were not recognised as important for most of the teams, again reflecting the predominance of biomedical thinking

Continued challenges

Approach to address challenges:

- EH mentoring - balanced between external EH support (experts) and recruitment of national or regional experts
- Experts covered: EH, policy translation, social science & gender, risk assessment
- EH training courses (at least one per year)
- Monitoring of EH uptake & outcome mapping

EH uptake - example

Factors for succesful EH uptake

Final year of project, **each team** was evaluated (combined with OM)

1. Managing use of social science - for systems thinking via synthetic interpretation of research findings

Low ability is characterized by:

limited integration of social science; limited integration of systems thinking; minimal linkages with practice…

High ability is characterized by:

high integration of social science/ systems thinking, good transdisciplinary integration of research studies; significant linkages with practice; …

2. Managing knowledge exchange & decision-making

3. Managing project administration – for time & resource allocation

4. Managing organizational culture & host institute norms

Evaluation: L-, L+, M-, M+, H-, H+

Continued challenges

- Deficits in generic research facilitation skills for some teams
  - Proposal writing, analysis, budgeting, publications
- Synthesis
  - Synthesize quantitative and qualitative results
  - Interdisciplinary data base, not achieved!
- Policy engagement
  - Mentoring by policy expert from IFPRI, 5 policy briefs
  - Some teams strong in engagement of policy makers

  e.g. Thailand slaughterhouse
- EH report
  - Required from donor
  - Document team changes in aspiration of EcoHealth, less technical
  - Sometimes hard for the teams but useful to keep EH spirit in mind

Two-dimensional capacity-building requirement

- EH concept (International, regional EH experts)
- Technical (implementation/methodological)

Proposal write shops, data analysis write shops, paper write shops (ongoing)

Country teams & case studies

Country	Zoonoses	Tool	Expertise	Challenge	Approach
Cambodia MOA,MOH, NGO, University	Diarrhea in human and animals	FGD, IDI, QX, Review, biological sampling	MD, Vet, Socio Econ, Social-Science, villagers	Disease prioritization Risk analysis	EH champion Consultant
Vietnam 2 institutes 1university	Lepto in human and animals	FGD, IDI, QX, Review, biol sampling	MD, Vet, Socio Econ, Social-Science Villagers	Disease prioritization	Mentoring ILRI Hanoi

Country teams & case studies

Country	Topic	Tool	Expertise	Challenge	Solution
THL/VN DLD, MOH, MARD, NIVR, University,	Hygiene in small scale chicken SH	FGD, IDI, QX, biological sampling	MD, Vet, Socio Econ, Social Science	Initial proposal very biometric	EH mentoring (Fred, CMU)
Laos DLF, PH, University	Pig zoonoses & prod. Diseases	QX, biological sampling	Socio Econ, MD, Vet, Villagers	Aligned to another project (ACIAR) Disease prioritization	Various consultations (Jeff G at CIAT Laos)

Eco ZD case study: Brucellosis/Toxoplasmosis in Yunnan

Brucellosis & Toxoplasmosis in Yunnan

1. Identification of common research topic

- Researchers from 4 different institutions with different research priorities, e.g. AI, toxoplasmosis, brucellosis, *M. bovis*, hepatitis DHF etc.

Approach:

- Various meetings including stakeholders but also community visits, some with ILRI others not
- Allocation of sufficient time (6-9 month)
- Facilitation and consensus building skills, toxoplasmosis and brucellosis selected (our choice would have been probably different)

Brucellosis & Toxoplasmosis in Yunnan

2. Limited or no experience with an EH approach

- Strong silo-thinking and biometric driven research team
- Focus was on biological sampling
  - Team went even to the field and collected samples before the CRA was signed, unclear sample design and research question
- No experience with qualitative methods

Approach: Frequent visit of ILRI scientist and support by an EH champion (Fang Jing)

Training on FGD and IDI tools

Relationship and trust building

Gained ownership by local authorities

Brucellosis & Toxoplasmosis in Yunnan

3. Synthesising qualitative and quantitative research results

- Focus was on collection and analysis of biological samples and quantitative data
- No experience with qualitative analysis

Approach: EH champion provided repeated training

First part of analysis strongly guided/done by EH champion e.g. In depth interviews in village doctors

Further analysis done jointly (IDI, butchers)

All others done by team (IDI, village Vets) and FGD

Brucellosis & Toxoplasmosis in Yunnan

Other challenges:

- Hierarchical differences between researchers
- Unfortunately the most “EH open” researcher was the youngest and also facing EN language difficulties
- Strong deficits in paper writing (mainly due to language barriers)

Approach: As mentioned before & identification of incentives, paper write shop (last week)

Brucellosis & Toxoplasmosis in Yunnan

Contributing factors for success:

- Highest motivated team, use of qualitative exited the team
- Invitation to national and international meetings – strong incentive (EH researchers)
- Upcoming publication (international journal)
- Extended networking (CMU, VPHCAP, PE)

After all one of the best teams together with the Indonesian team

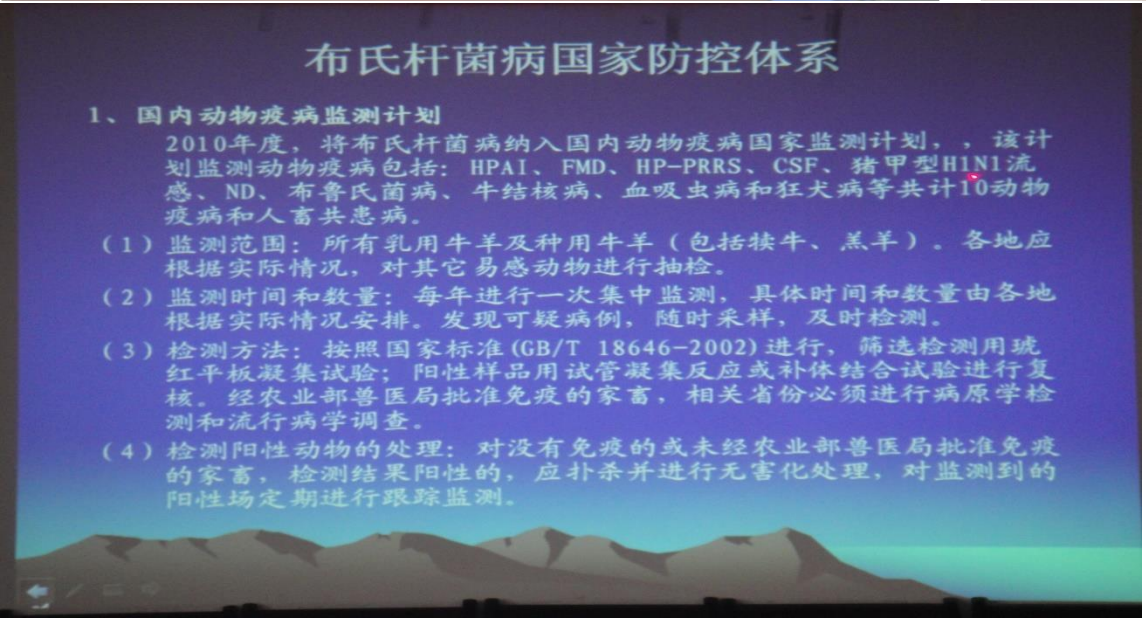
* L ** M ***H

Case studies: Yunnan team

EH principles	+	-	Evaluation	Comments
Transdisciplinary research	Some changes within the research team	Still biometric, PH driven	**	
Participation	Various actors, groups & tools		**	EH champion, team highly motivated
Equity/gender	Ethnic minorities	Gender perspective weak	*	
Knowledge to action	Policy brief Policy meetings		**	Sometimes lost track as in Chinese
System thinking	EH framework	Not fully applied	*	Continuous challenge
Sustainability	Enhanced exchange at village level (Vet, PH, village heads, party committee) Networking		**	Positive side effects (village toilets)

Challenges

FGD in the commercial dairy cattle farm and the village, Yiliang, April 2012

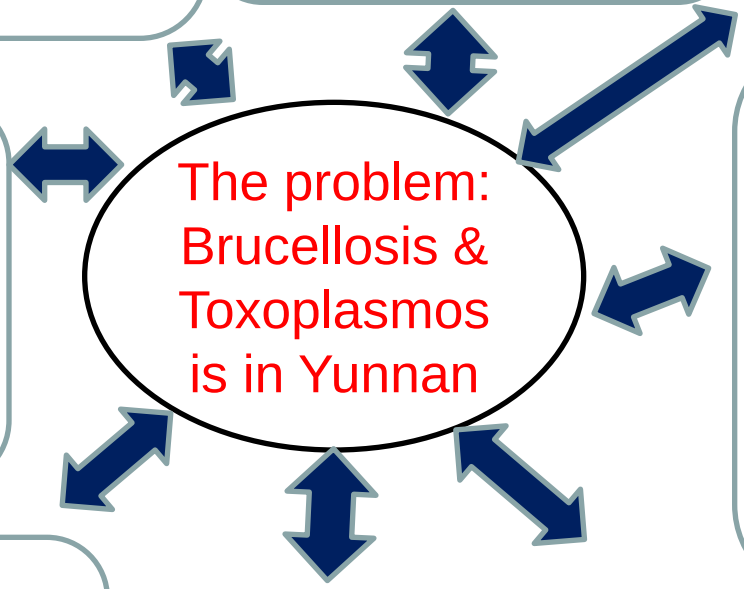


Framework for China study

Public health authorities (hospitals and local) (IDI)
- Review of existing information
- General Z knowledge
- Specific action B & T patients
- Collaboration with PH

Survey:
- Dairy farms (milk)
- People at risk (serum)

Farmers (QX)
- Production data
- AH and disease prevention
- Reproductive disorders
- Zoonoses and OH



Vet officers/stations (IDI)
- Review of existing information
- General Z knowledge
- Specific action B & T
- Control
- Collaboration with PH

Villagers (with/without livestock) (FGD)
- Animal husbandry
- Zoonoses
- Risk factors
- AH services
- PH services
- Source of information

Past unit, milk vendors (FGD):
- Zoonoses knowledge
- Quality control
- Sanitation
- Inspection by authorities

Hospital case review:
- Clinical cases

Literature review

Butchers (IDI)
- General Z knowledge
- Specific knowledge B & Toxo
- Health check and status
- Hygiene and training
- Waste management

Case studies: added value of Eco health

Optimizing Rabies Control in Bali: An Ecohealth Approach.”

Case studies: Indonesia

Optimizing Rabies Control in Bali: An Ecohealth Approach."

Identification of a common research topic:

- Lead by team (CIVAS) and based on a call for proposals
- Rabies is an emerging zoonoses since its introduction
- Conventional control measures show limited success

Objective:

to help the government of Bali in controlling rabies in dogs through better understanding of the dog population, dog behavior in Bali and its relationship with the local community

Various stakeholders and groups involved:

MD, Vets, Social Science, Communities, Environment sector, tourist sector, media, schools, village cadres, private sector, political perspectives

Case studies: added value of Eco health

Optimizing Rabies Control in Bali: An Ecohealth Approach

Eco Health story:

- EH changed the way the team planned research and dissemination.
- Boundary partners (rabies cadres and heads of village) incorporated the rabies control programme in their village traditional law, and showed willingness to continue this model of Village Rabies Working Group (VRWG) by their own fundraising programmes after EcoZD.
- Provincial Livestock Service Office were convinced to support an island-wide training programme for VRWG of two people from each village (covering the 723 villages.

Case studies: Rabies in Bali

EH principles	+	-	Evaluation	Comments
Transdisciplinary research	Changes within the research team		**	
Participation	Various groups and participatory tools, song, video		***	Strongest community involvement
Equity/gender	Gender perspective		**	
Knowledge to action	Policy brief	Policy meetings	**	Supported by consultant
System thinking	EH framework	Not fully applied	**	
Sustainability	Expansion of involvement of village cadres Involvement in new EH initiatives		**	Publications, schools

Lessons learned

- Keep room and time to adapt approaches
- Allocate sufficient time to expected changes of teams operations (EH) & boundary partners
- Identify & engage potential EH champions
- Trust building & incentives
- Continued mentoring on how to best incorporate EH in the proposals, field work and analysis
  - Balanced use of external & national experts
- Develop and use an evaluation system
- EH stories should be developed and documented
- Perhaps use a specific EH reporting format which encourages the team to report *not technical as usual*

Special thanks to the former EcoZD team and its partners
In particular: J Gilbert, H Nguyen, R Asse, P Mehta, K. Tohtubtiang, L Lapar, D Grace

better lives through livestock

ilri.org

ilri.org
better lives through livestock
ILRI is a member of the CGIAR Consortium

Box 30709, Nairobi 00100 Kenya
Phone +254 20 422 3000
Fax +254 20 4223001
Email ilri-kenya@cgiar.org

ILRI has offices in:
Central America • East Africa
• South Asia • Southeast and East Asia
• Southern Africa • West Africa

APEIR
Asia Partnership on Emerging Infectious Diseases Research

ComAcross

cirad
LA RECHERCHE AGRONOMIQUE POUR LE DÉVELOPPEMENT

EcoEID

- **INDOHUN**
- **THOHUN**
- **VOHUN**
- **MYOHUN**

EHRCs

BECA
Building Ecohealth Capacity in Asia

ILRI
INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

CENPHER
TRUNG TÂM Y TẾ CÔNG CỘNG VÀ HỆ SINH THÁI
CENTER FOR PUBLIC HEALTH AND ECOSYSTEM RESEARCH

Swiss TPH

GHI

World Health Organization

IDRC CRDI Canada

USAID
FROM THE AMERICAN PEOPLE

Emerging Pandemic Threats Program
PREDICT • RESPOND • PREVENT • IDENTIFY

Oie World Organisation for Animal Health

ACIAR

Modified from Hung Nguyen, 2013